

## HOW TO CONTROL RATS

The rat is a major pest in Pennsylvania, and little effort is being made to control it. It is estimated that in the United States, the annual damage is \$200,000,000 and that it requires the labor of 200,000 men annually to feed them. In Pennsylvania the annual loss is not less than ten million dollars. The rat is prolific, producing six or more litters a year, with each litter containing about ten young. The offspring from a single pair of rats during a life-time period of three years, without the intervention of disease or control measures, has been figured to amount to 359,709,582 rats.

**Ratproof Buildings.** The first step in rat control is to "build them out of existence" by ratproofing all the buildings on the place. Cement the walls and floors of farm buildings extending the cement down into the ground for a foot to prevent the rat from getting inside. This cement outside should have a slanting top so that rain will not stand on it and so that the rats cannot get a foothold. If you will so treat all your buildings, house, barn, springhouse, and any other out-buildings the rats will have no refuge and they will hunt other and more congenial surroundings. This sounds expensive but the rat is so destructive the saving by getting rid of him will **MORE THAN PAY THE INTEREST OF THE INVESTMENT**. So protect all food-stuffs, stored cereals and grains, that the rat can not have access to them and thus make poisoning and trapping easier. When food is abundant the rat is hard to catch.

**How to Trap Rats.** The guillotine type of trap is best for the rat. Place the trap along the wall in such manner that the rat must run over it when following along the wall. It is not always necessary to bait the trap, but if baiting is done, tie or wire the bait to the trigger; use enough to entirely cover trigger. Bacon, beef, fish, fresh liver, nut-meats or cheese will make good bait. Be sure that the trigger on the trap will work instantly upon being touched. Use an abundance of traps. In apartment houses or large warehouses from twenty to several hundred will be needed. On a medium-sized farm not less than a hundred well placed and baited traps are necessary to do effective work.

**How to Poison Rats.** Barium carbonate is effective in poisoning rats. A variety of baits must be used. One or more of each of the following classes should be tried: (1) Meat. Hamburg steak, sausage, fish, liver, bacon and cheese. (2) Vegetable and fruits. Thin slices of muskmelon, apple, tomato, cucumber, or canned corn, squash, or

pumpkin seed; or mashed banana, boiled carrot, or baked sweet potato. (3) Cereals. Rolled oats, bread, corn meal, flour or cake, kitchen scraps and garbage can be worked into the ration. The bait should be fresh and preferably good quality. The powdered barium carbonate should be well mixed with soft bait. Use one part of the barium carbonate to four parts of the bait. Add water enough to make the bait moist. On the sliced baits sift the barium carbonate over the surface and rub in with the fingers or a knife. Use at the same ratio that is 1 to 4.

To distribute the bait place a teaspoonful of each of the three or more kinds of baits prepared in exposed places frequented by rats. A convenient method is to place the bait in small paper sacks and close by twisting the top. Do not place near a rat hole but scatter them about. The uneaten baits should be gathered the following morning and destroyed. Soured baits change the barium carbonate to a repellent to the rat. Continue to distribute bait each night using less number of baits. Remember barium carbonate is a poison and must be kept away from irresponsible persons and domestic animals. It is unlawful to use poison baits outside of buildings.

**Fumigation to Control the Rat.** Carbon bisulfide when used two tablespoonfuls to each burrow, will kill all the rats in that burrow. This material is explosive and must be kept and used where there is no fire.

Gasoline engine exhaust fumes are deadly to rats as well as other rodents. The carburetor is adjusted to obtain a rich mixture and the engine run at a moderate speed. The exhaust is carried to the burrow by means of a hose which should be sealed in place with moist earth.

Flake naphthalene is said to be objectionable to rats and will keep them away. However because of its odor it should not be used where food or foodstuffs are stored.

Calcium cyanide may be used in rat control. Since the killing agent is hydrocyanic acid and this acid is a most deadly poison in slight amounts to man as well as other animals much care should be taken in its use and the directions as given on the container should be closely followed.

**Natural Enemies of the Rat.** A good active dog will do much toward keeping a farm free from rats. Ferrets are valuable when handled by experienced men. Cats are not usually good ratters. Snakes, hawks and owls are also enemies of the rat.

**Viruses.** The control of the rat by bacterial disease has a peculiar appeal. The method, however, has proven generally unsatisfactory according to reports of the United States Biological Survey.